FIG. 1

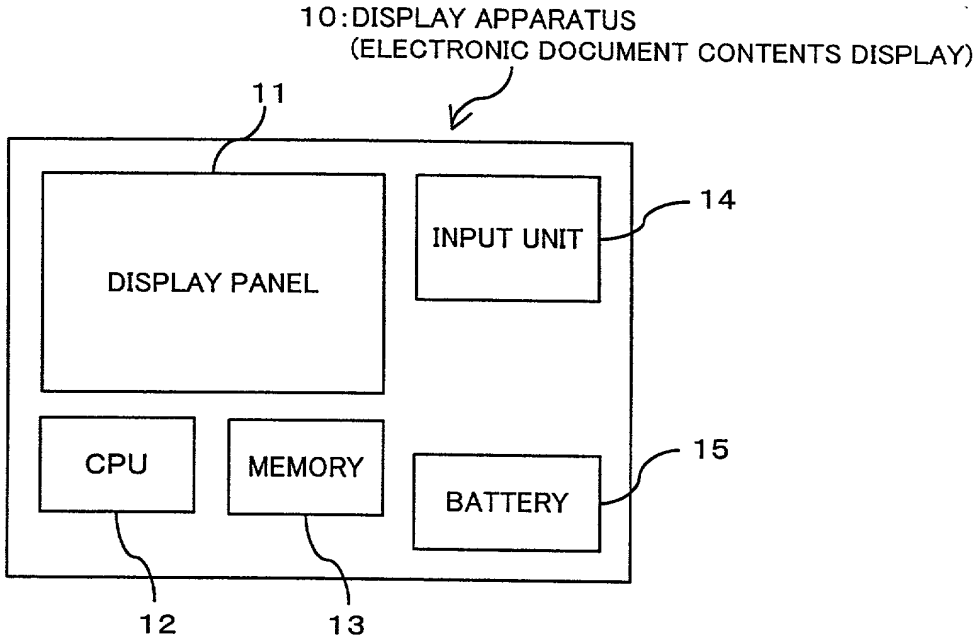
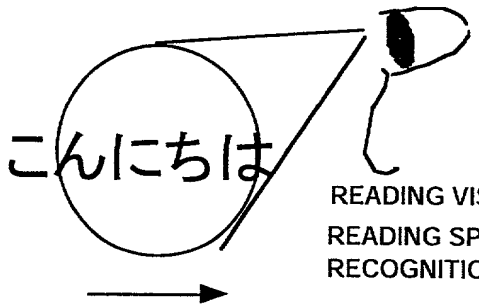

10:DISPLAY APPARATUS
(ELECTRONIC DOCUMENT CONTENTS DISPLAY)
11
DISPLAY PANEL
INPUT UNIT
14
CPU
MEMORY
BATTERY
15
12
13

FIG. 2A

READING

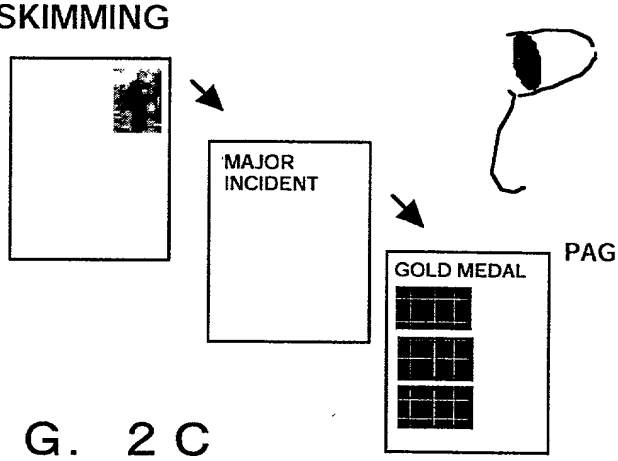


READING VISUAL FIELD : 3.2 CHARACTERS
READING SPEED : 100 sec/page
RECOGNITION SPEED : 250 msec

VISUAL FIELD MOVING SPEED : 25 msec

FIG. 2B

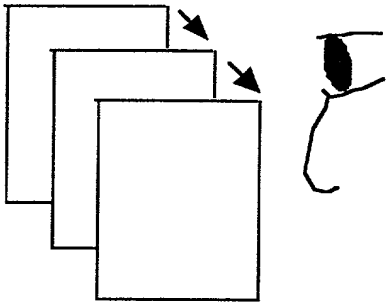
SKIMMING



PAGE READING SPEED : 3 sec/page

FIG. 2C

GLANCING



PAGE READING SPEED : 0.3 sec/page

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FIG. 3

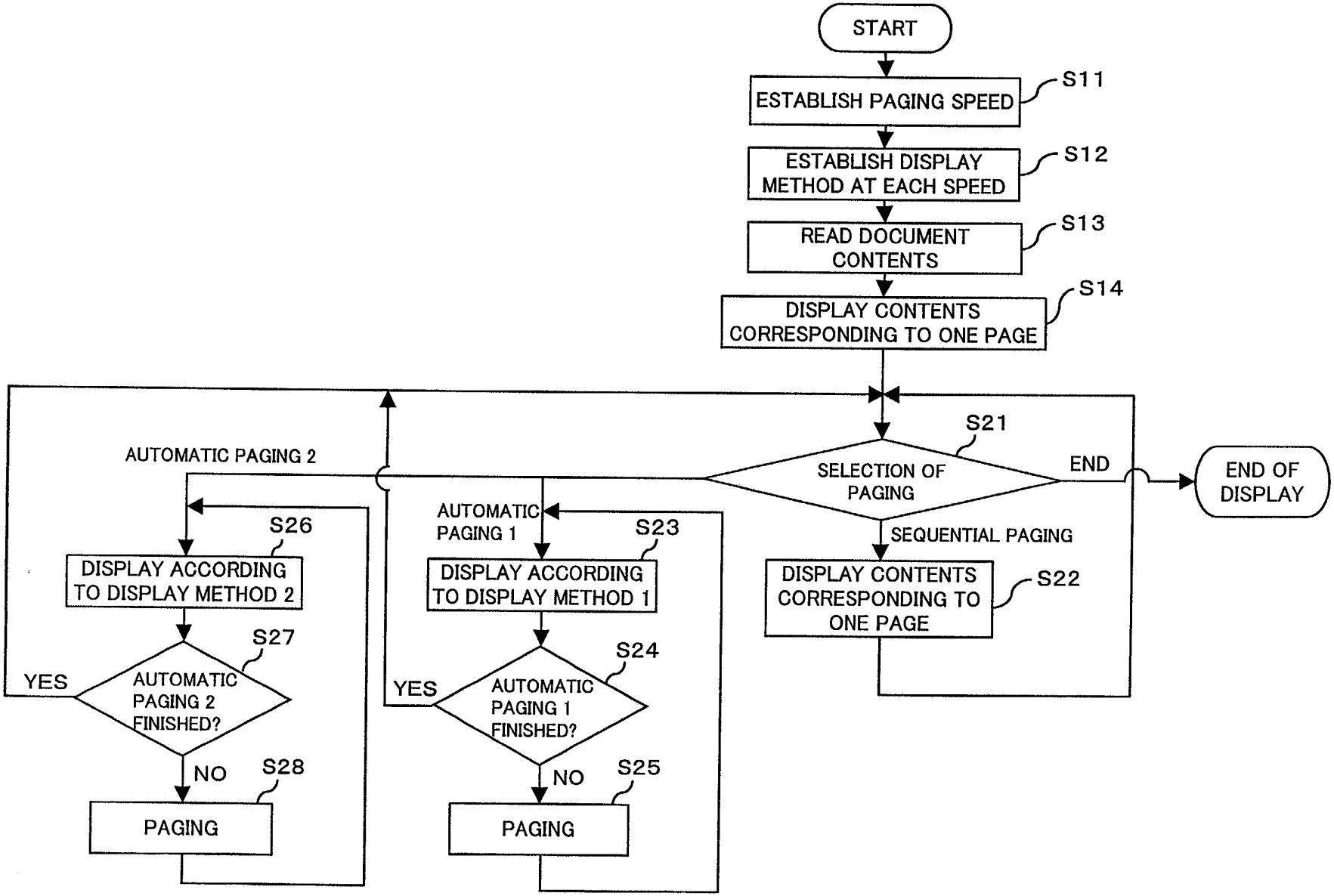

FIG. 4

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2

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FIG. 5

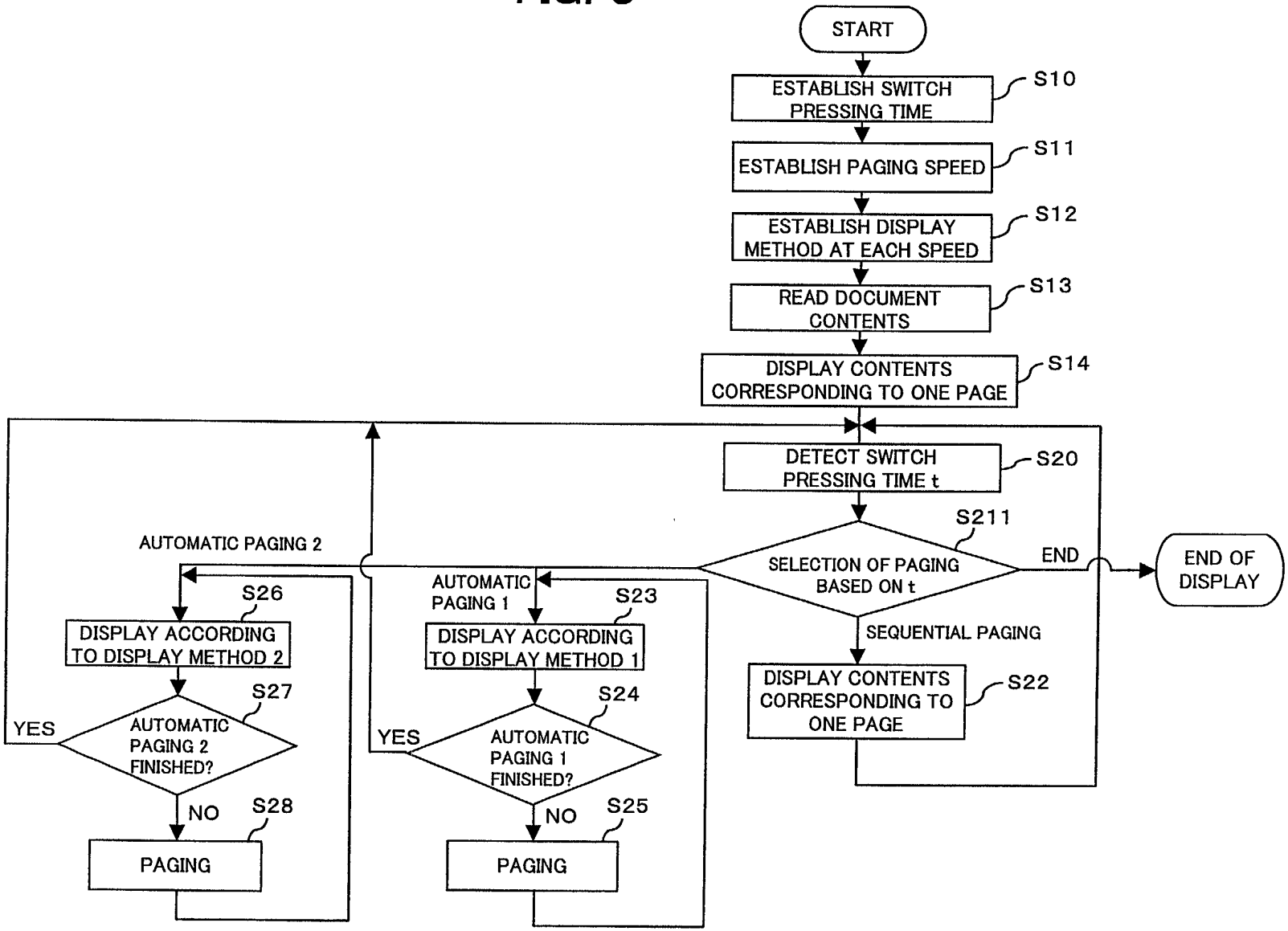

FIG. 6A

	PRESSING TIME
SEQUENTIAL PAGING → AUTOMATIC PAGING 1	T1
AUTOMATIC PAGING 1 → AUTOMATIC PAGING 2	T2

FIG. 6B

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2

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FIG. 7

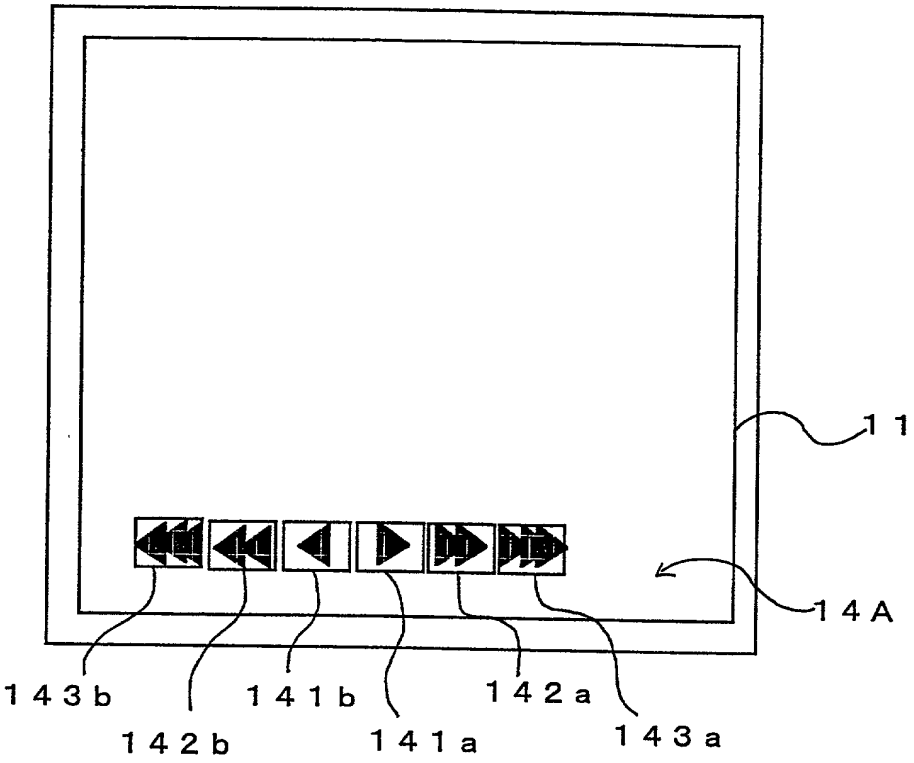

FIG. 8

PAGING METHOD	SWITCH
SEQUENTIAL PAGING	PAGING SWITCH 1
AUTOMATIC PAGING 1	PAGING SWITCH 2
AUTOMATIC PAGING 2	PAGING SWITCH 3

FIG. 9

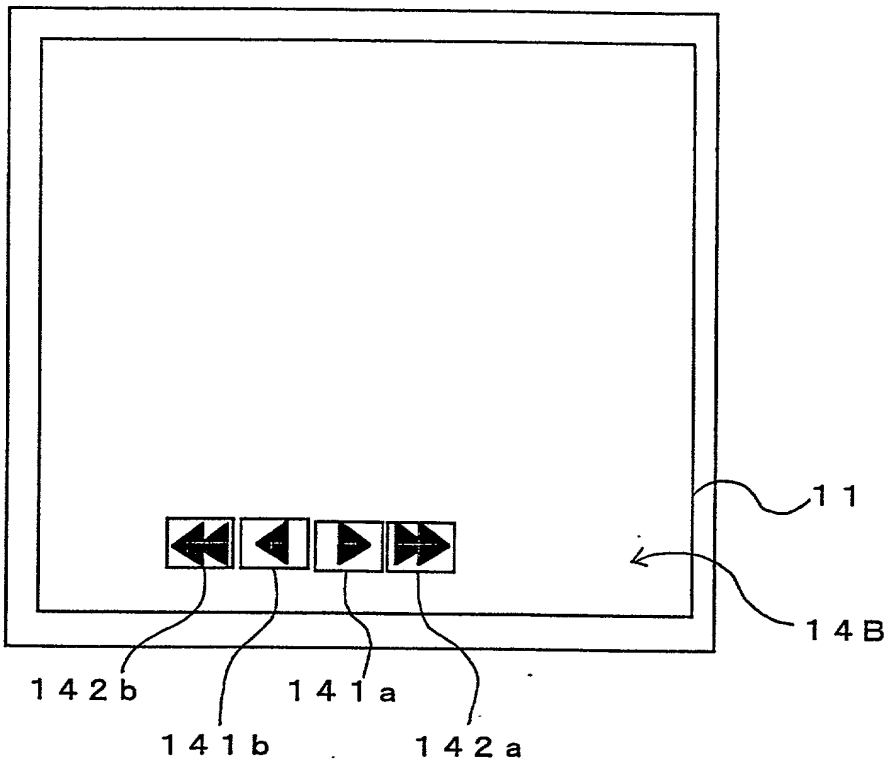

FIG. 10

PAGING METHOD	SWITCH
SEQUENTIAL PAGING	PAGING SWITCH 1
AUTOMATIC PAGING 1	CONTINUOUS PRESSING OF PAGING SWITCH 1
AUTOMATIC PAGING 2	CONTINUOUS PRESSING OF PAGING SWITCH 2

FIG. 11

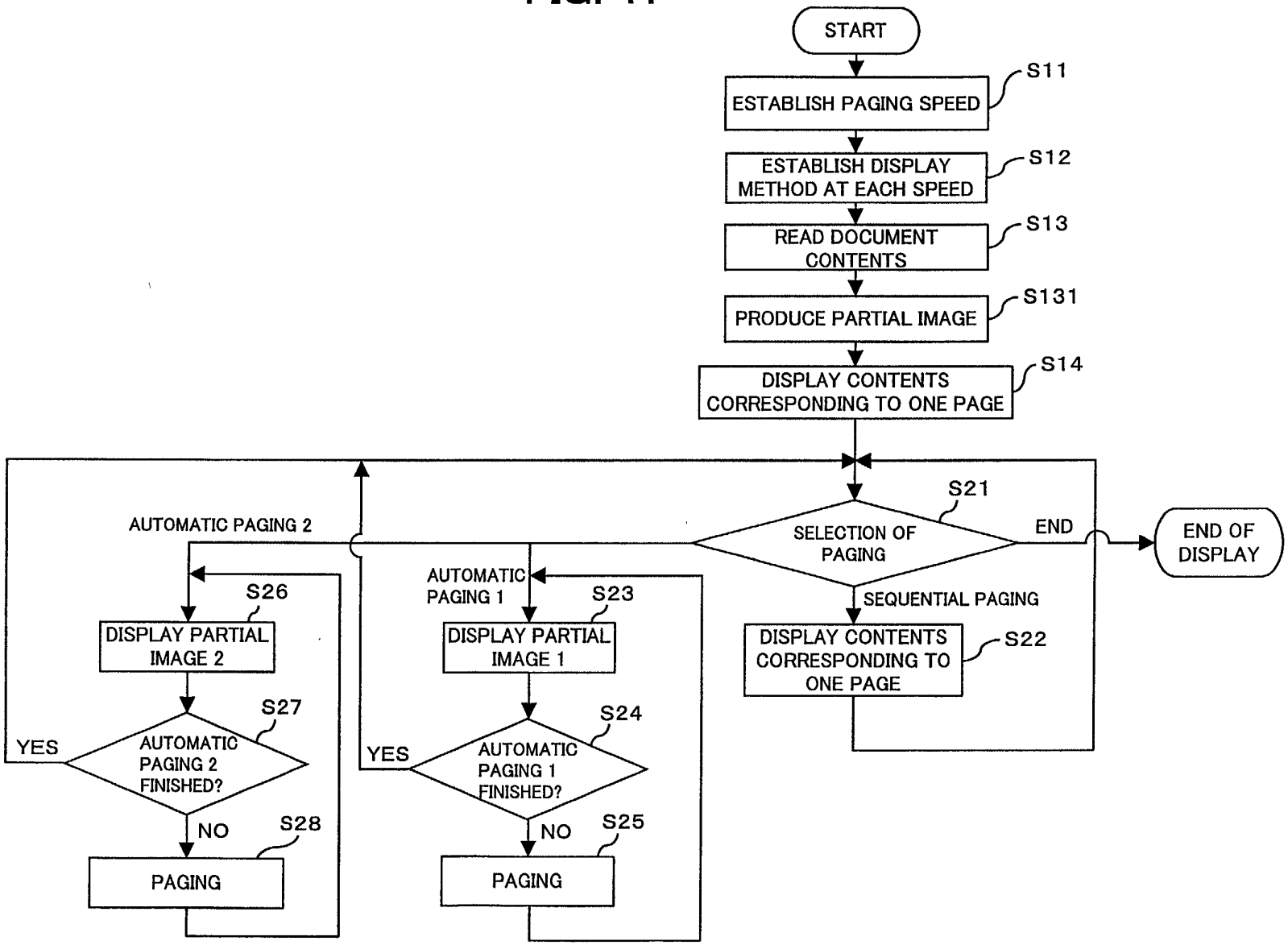
START
ESTABLISH PAGING SPEED
S11
ESTABLISH DISPLAY METHOD AT EACH SPEED
S12
READ DOCUMENT CONTENTS
S13
PRODUCE PARTIAL IMAGE
S131
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S14
S21
SELECTION OF PAGING
END
END OF DISPLAY
SEQUENTIAL PAGING
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S22
AUTOMATIC PAGING 1
S23
DISPLAY PARTIAL IMAGE 1
S24
YES
AUTOMATIC PAGING 1 FINISHED?
NO
S25
PAGING
AUTOMATIC PAGING 2
S26
DISPLAY PARTIAL IMAGE 2
S27
YES
AUTOMATIC PAGING 2 FINISHED?
NO
S28
PAGING

FIG. 12

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	PARTIAL DISPLAY 1
AUTOMATIC PAGING 2	0.3sec	PARTIAL DISPLAY 2

FIG. 13

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1 TITLE-DISPLAY
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2 LAYOUT-DISPLAY

FIG. 14

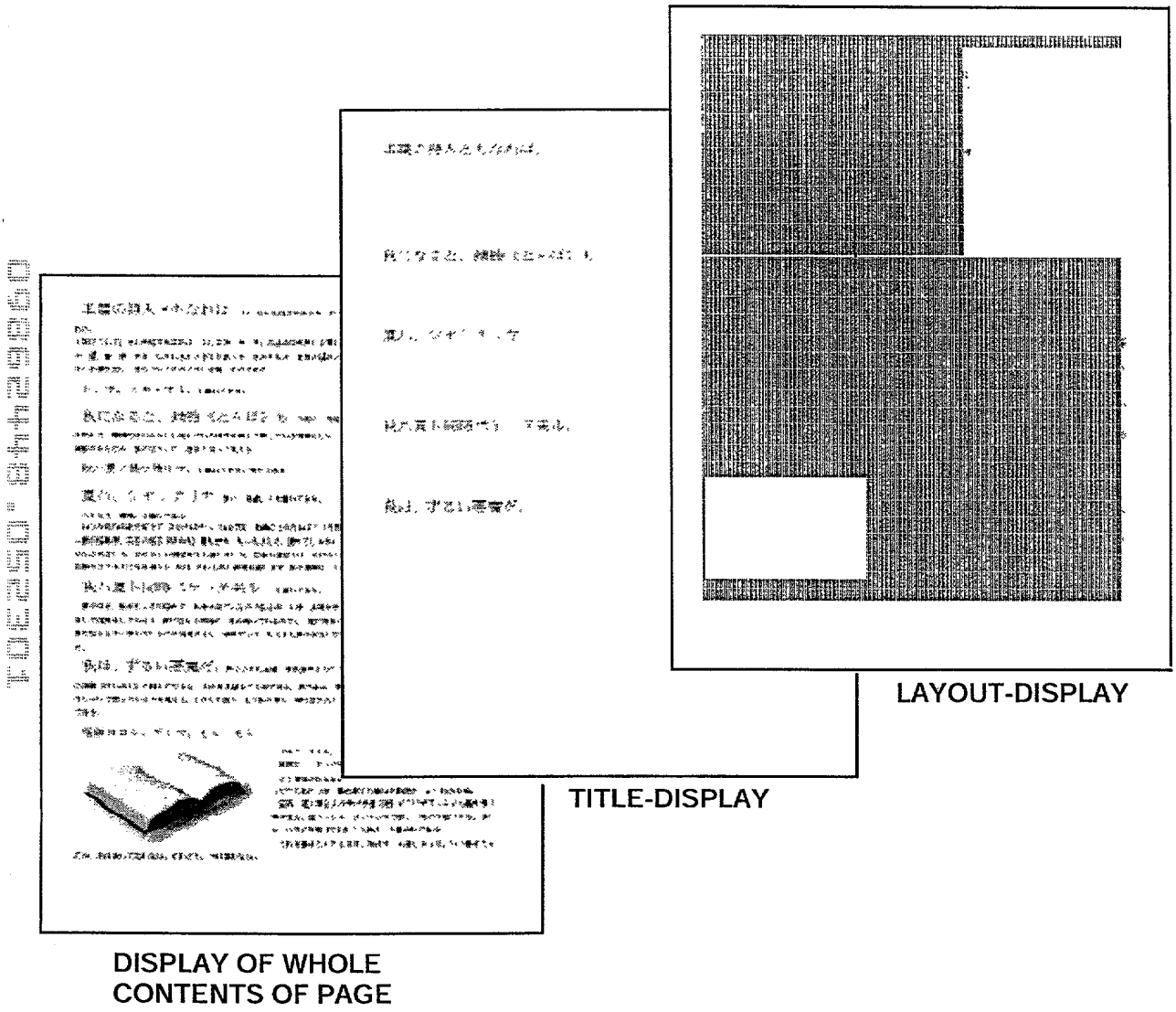
LAYOUT-DISPLAY
TITLE-DISPLAY
DISPLAY OF WHOLE
CONTENTS OF PAGE

FIG. 15

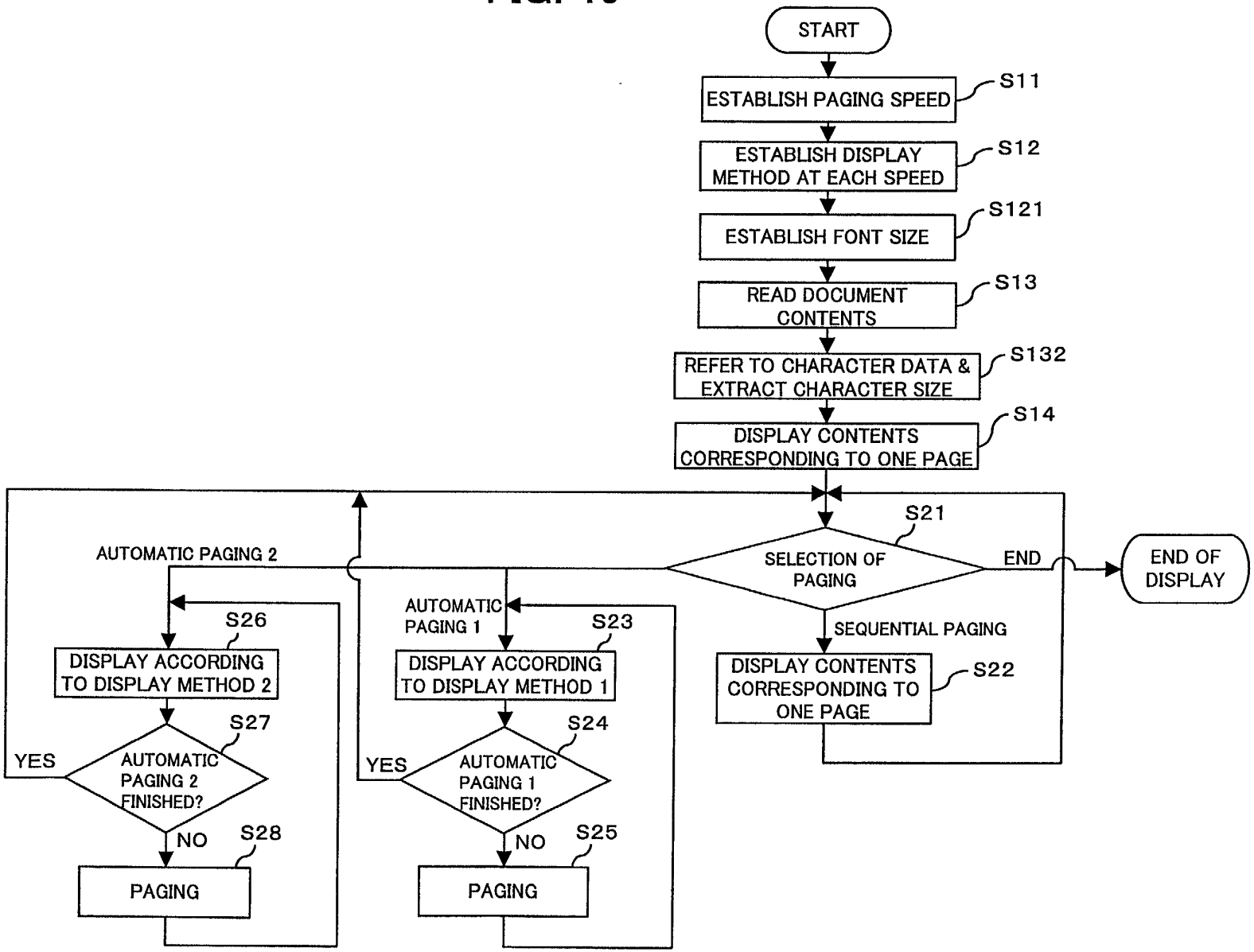
START
ESTABLISH PAGING SPEED
S11
ESTABLISH DISPLAY METHOD AT EACH SPEED
S12
ESTABLISH FONT SIZE
S121
READ DOCUMENT CONTENTS
S13
REFER TO CHARACTER DATA & EXTRACT CHARACTER SIZE
S132
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S14
S21
SELECTION OF PAGING
END
END OF DISPLAY
SEQUENTIAL PAGING
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S22
AUTOMATIC PAGING 1
S23
DISPLAY ACCORDING TO DISPLAY METHOD 1
S24
YES
AUTOMATIC PAGING 1 FINISHED?
NO
S25
PAGING
AUTOMATIC PAGING 2
S26
DISPLAY ACCORDING TO DISPLAY METHOD 2
S27
YES
AUTOMATIC PAGING 2 FINISHED?
NO
S28
PAGING

FIG. 16

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1 DISPLAY FONT SIZE EXCEEDING F1
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2 DISPLAY FONT SIZE EXCEEDING F2

FI<F2

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FIG. 17

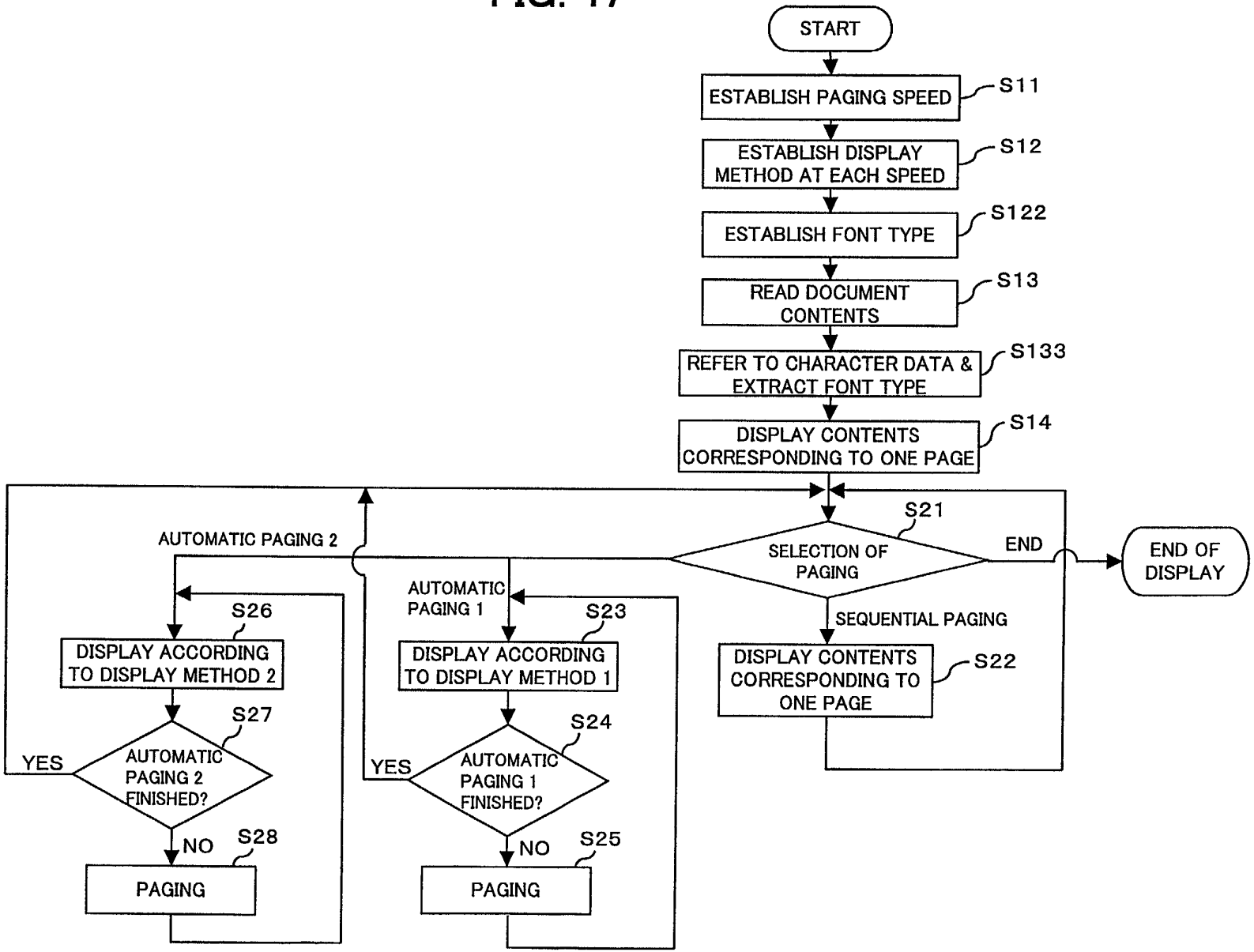
START
ESTABLISH PAGING SPEED
S11
ESTABLISH DISPLAY METHOD AT EACH SPEED
S12
ESTABLISH FONT TYPE
S122
READ DOCUMENT CONTENTS
S13
REFER TO CHARACTER DATA & EXTRACT FONT TYPE
S133
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S14
S21
SELECTION OF PAGING
END
END OF DISPLAY
SEQUENTIAL PAGING
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S22
AUTOMATIC PAGING 1
S23
DISPLAY ACCORDING TO DISPLAY METHOD 1
S24
YES
AUTOMATIC PAGING 1 FINISHED?
NO
S25
PAGING
AUTOMATIC PAGING 2
S26
DISPLAY ACCORDING TO DISPLAY METHOD 2
S27
YES
AUTOMATIC PAGING 2 FINISHED?
NO
S28
PAGING

FIG. 18

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1 FONT TYPE 1
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2 FONT TYPE 2

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FIG. 19

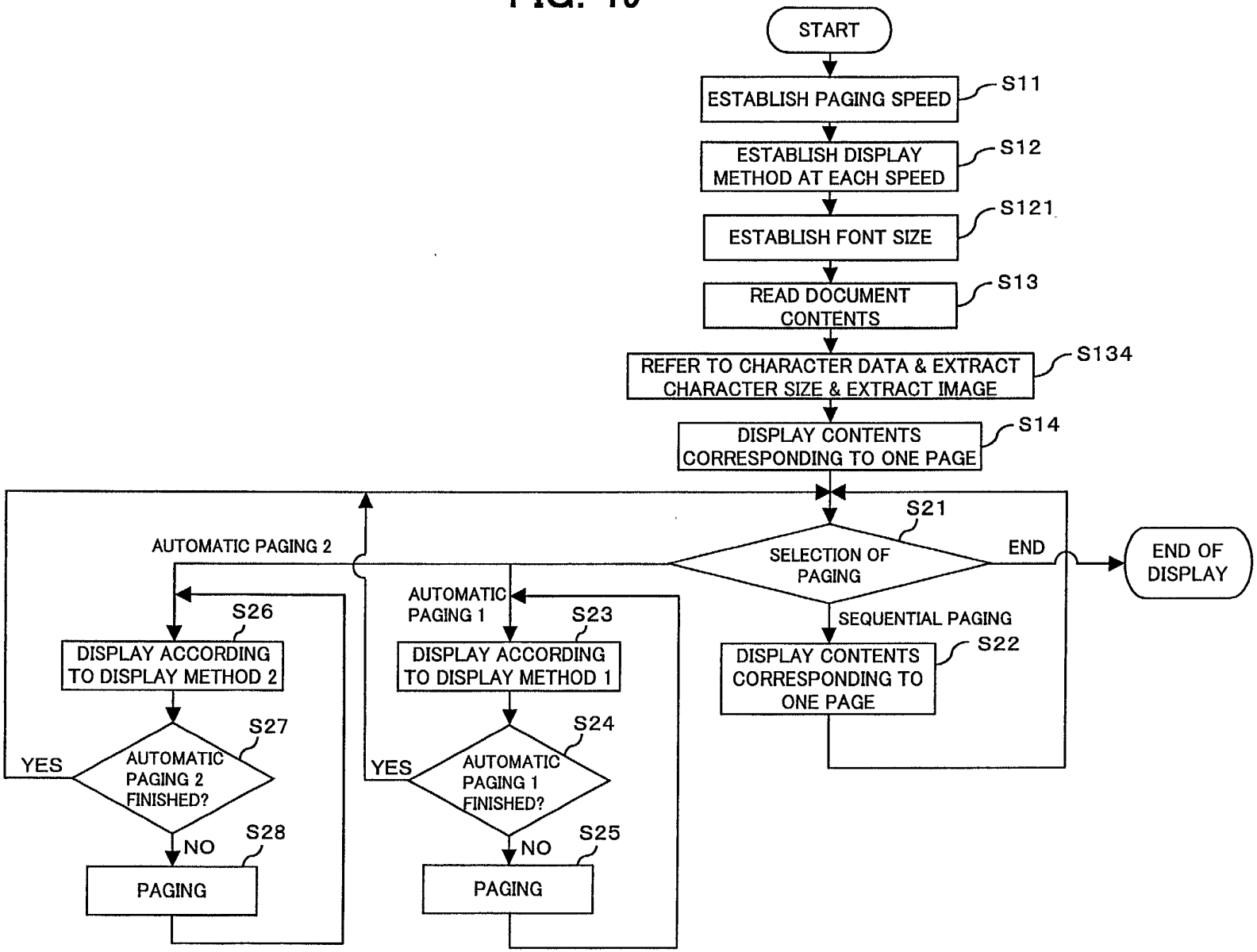
START
ESTABLISH PAGING SPEED
S11
ESTABLISH DISPLAY METHOD AT EACH SPEED
S12
ESTABLISH FONT SIZE
S121
READ DOCUMENT CONTENTS
S13
REFER TO CHARACTER DATA & EXTRACT CHARACTER SIZE & EXTRACT IMAGE
S134
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S14
S21
SELECTION OF PAGING
END
END OF DISPLAY
SEQUENTIAL PAGING
DISPLAY CONTENTS CORRESPONDING TO ONE PAGE
S22
AUTOMATIC PAGING 1
S23
DISPLAY ACCORDING TO DISPLAY METHOD 1
S24
YES
AUTOMATIC PAGING 1 FINISHED?
NO
S25
PAGING
AUTOMATIC PAGING 2
S26
DISPLAY ACCORDING TO DISPLAY METHOD 2
S27
YES
AUTOMATIC PAGING 2 FINISHED?
NO
S28
PAGING

FIG. 20

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1 DISPLAY FONT SIZE EXCEEDING F1
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2 DISPLAY ONLY IMAGE

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FIG. 21

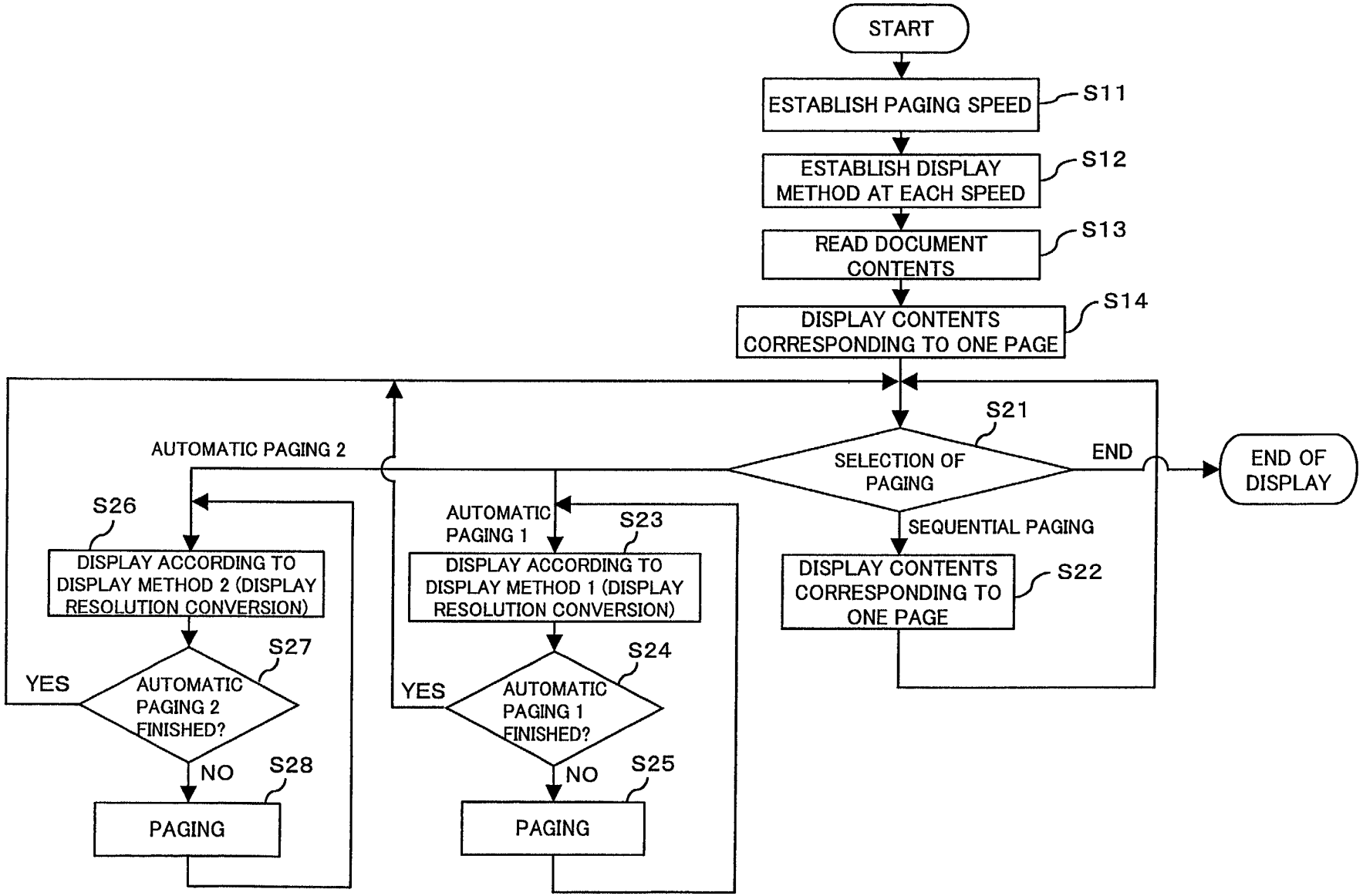

FIG. 22

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1 BELOW DISPLAY RESOLUTION R1
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2 BELOW DISPLAY RESOLUTION R2

RI>R2

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FIG. 23A

PAGE EJECTION (PAGING)	SPEED	DISPLAY METHOD
SEQUENTIAL PAGING	—	DISPLAY OF WHOLE CONTENTS OF PAGE
AUTOMATIC PAGING 1	3sec	DISPLAY METHOD 1 BELOW DISPLAY RESOLUTION R1
AUTOMATIC PAGING 2	0.3sec	DISPLAY METHOD 2 FONT TYPE 2

ESTABLISHMENT EXAMPLE

FIG. 23B

FONT TYPE
IMAGE DISPLAY
RESOLUTION CONVERSION
FONT SIZE
:

ESTABLISHABLE DISPLAY METHOD

FIG. 24A
RELATED ART

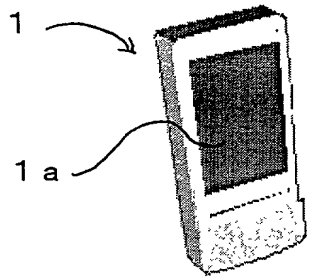
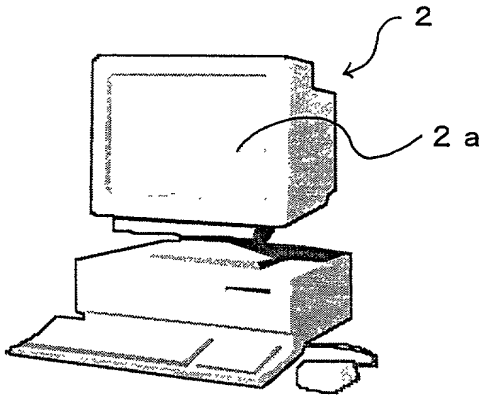
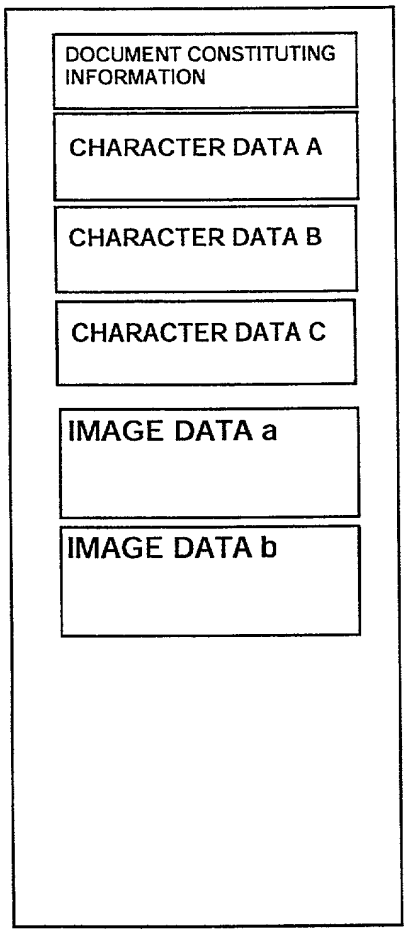


FIG. 24B
RELATED ART



0065456-0505301

FIG. 25A
RELATED ART



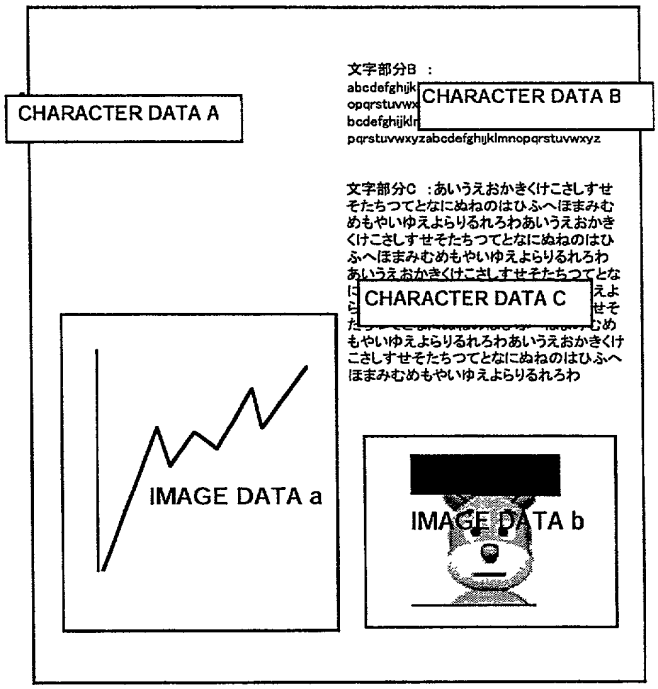
LAYOUT PRESERVATION FORMAT

DOCUMENT CONSTITUTING INFORMATION: COMPOSITION INFORMATION, ID OF EACH ELEMENT,POSITION OFEACH ELEMENT, AND APPEARANCE INFORMATION

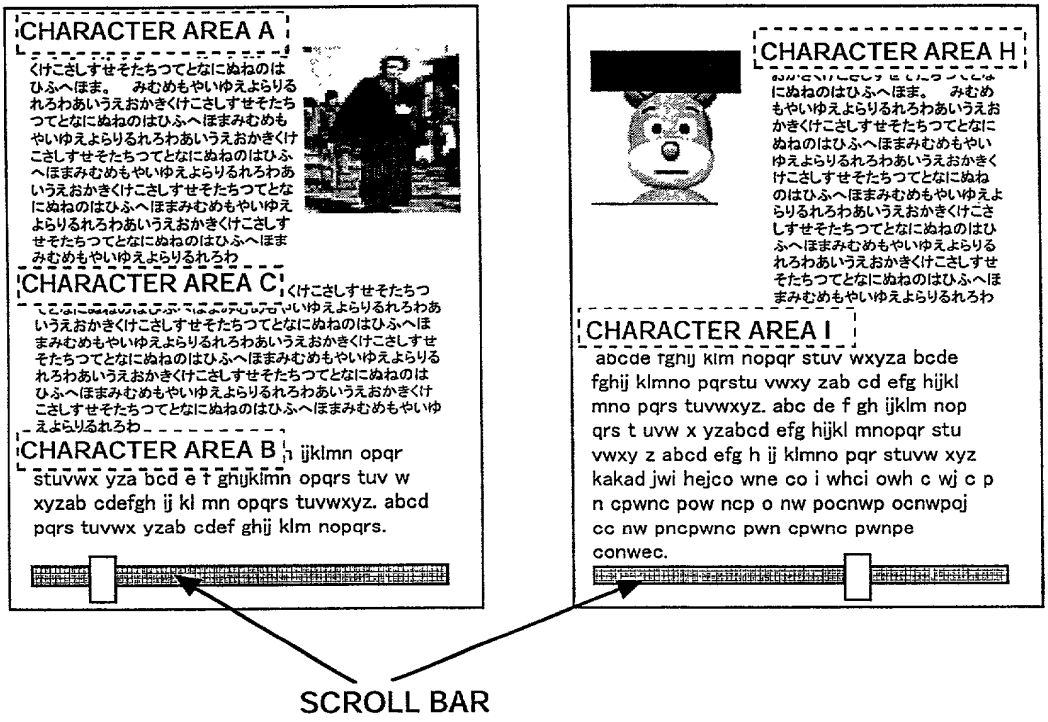
CHARACTER DATA : FONT SIZE, FONT TYPE, CHARACTER COLOR, CHARACTER SPACE

IMAGE DATA : IMAGE FILE TYPE, IMAGE SIZE

FIG. 25B
RELATED ART



PAGE IMAGE FORMAT

FIG. 26

RELATED ART